

CLAIMS

1. A nut cold cutter device used in the assembly and maintenance of semi-autogenous grinding mills for large-scale mining CHARACTERIZED because it consists of:

a front body, a back body and a hydraulic cylindrical chamber located between the front and back bodies; and said front body has a defined cavity in which there is a movable cutting tool and a fixed cutting tool, and the nut to-be-cut will be positioned in the space located between the two cutting tools.

2. The nut-cutting device described in claim 1 CHARACTERIZED because said hydraulic cylindrical chamber contains a push piston on the inside that is sealed to the inside of said hydraulic cylindrical chamber with some watertight joints.
3. The nut-cutting device in claims 1 and 2 CHARACTERIZED because said push piston is attached to a toolholder axis by joining elements, and said movable cutting tool is attached to the front end of said toolholder axis.
4. The nut-cutting device in claim 3 CHARACTERIZED because the geometry of said movable cutting tool has a unique trait which is a sharp angle finishing.
5. The nut-cutting device in claim 1 CHARACTERIZED because said fixed cutting tool is located in a front-facing position with respect to said movable cutting tool on the same level defined by the cutting device's longitudinal axis.
6. The nut-cutting device in claims 1 and 5 CHARACTERIZED because said fixed cutting tool is interfaced with the upper inside end of said front body.

7. The nut-cutting device in claim 1 CHARACTERIZED by the installation of two front mobile bodies, the two front mobile bodies having the capacity to slide and to be pressed one against the other due to the springs located on the front part of the mobile bodies; the springs allowing the nut to be cut in an exact position.
8. The nut-cutting device in claim 7 CHARACTERIZED because said movable bodies are mounted on fixed guides located on the inside upper side of said front body and prevent said movable bodies from moving in the wrong direction along their defined longitudinal course.
9. The nut-cutting device in claim 1 CHARACTERIZED because a connection shank with an orifice through which the nut-cutting device can be connected to a remote control system, is attached to said back body.
10. The nut-cutting device in claim 1 CHARACTERIZED because on the side of said back and front bodies there is a hydraulic fluid access and a hydraulic fluid exit, respectively, for said hydraulic cylindrical chamber.
11. The nut-cutting device in claim 10 CHARACTERIZED because couplings that allow for connecting the nut-cutting device up to a hydraulic force generation system have been placed on said hydraulic fluid access and exit.
12. The nut-cutting device in claim 1 CHARACTERIZED because said movable and fixed cutting tools are manufactured from steel covered in carbide-tungsten or carbide-silicon.
13. The nut-cutting device in claim 1 CHARACTERIZED because each of the said front and back bodies are manufactured from one single forged body that is subsequently thermally treated and mechanized.
14. The nut-cutting device in claim 13 CHARACTERIZED because said forged body is made from high-strength forged steel with a combination of chrome-nickel-molybdenum as the main alloy elements.

15. The nut-cutting device in claim 1 CHARACTERIZED by the body of said circular hydraulic camera being made of stainless steel.

16. The nut cutting device in claim_1 CHARACTERIZED because said movable bodies are manufactured from high-strength steel with chrome-nickel type alloy elements and because said springs are manufactured from steel with a high silicon content.